Natural Heritage & Endangered Species Program
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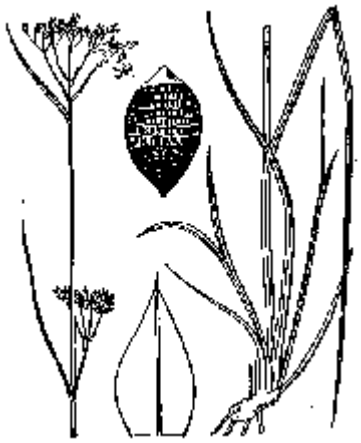
Torrey's Beak-sedge

Rhynchospora torreyana

State Status: **Endangered**
Federal Status: None



Britton, N.L. and A. Brown. 1970. *An Illustrated Flora of the Northern United States and Canada*. Second Edition. Dover Publications, Inc. New York.

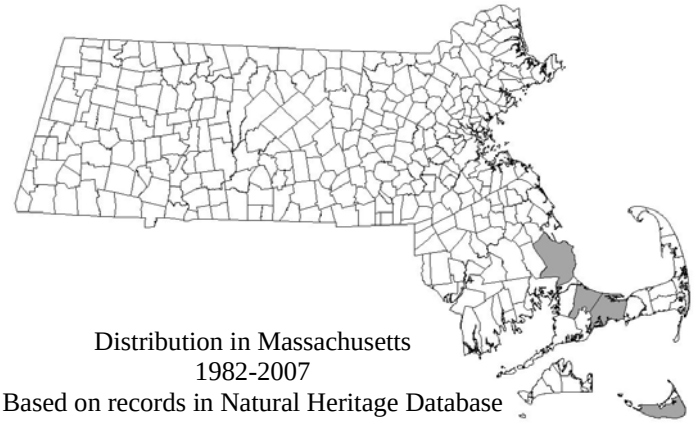
Description: Torrey's Beak-sedge (*Rhynchospora torreyana*) is a tufted perennial sedge (family Cyperaceae) of coastal damps sands and peats with very slender leaves and a chestnut-colored inflorescence.

Aids to identification: Torrey's Beak-sedge reaches 19 to 39 inches (50–100 cm), with several stems arising from clumps of very slender (1–2 mm) basal leaves. The inflorescence is a corymbiform (flat-topped) cluster of two to four branched cymes, made up of chestnut-colored spikelets. The spikelets are egg-shaped, 3 to 4 mm in size, and composed of three to six flowers, each with short, upwardly-serrate (antrorsely barbed) perianth bristles. The dark brown achenes (one-seeded fruits) are tiny (less than 2 mm), short beaked, and strongly flattened with about 12 transverse ridges. The wrinkled surface of the achene is visible at 10 × magnification. Mature fruit is present from August to early October.

Similar species: Several species of beak-sedge inhabit similar habitats as Torrey's Beak-sedge, and hence a technical key should be consulted. Brown Beak-sedge (*Rhynchospora capitellata*) is a co-occurring species which has denser spikelets and usually downwardly-serrate (retrorsely barbed) perianth bristles. Also, the achenes of Brown Beak-sedge are more strongly tapered to the base than those of Torrey's Beak-sedge.

Habitat in Massachusetts: Torrey's Beak-sedge grows along the seasonally wet, sandy to peaty soils of low nutrient, acidic wetlands, primarily coastal plain pondshores. On Nantucket, Torrey's Beak-sedge inhabits areas that simulate seasonally wet pondshores, such as moist mown areas and scraped land near the water table. It prefers full sun and does not compete well with shrubs; therefore fluctuating water levels are important for the persistence of this species at a site. Associated species include Canada Bluejoint (*Calamagrostis canadensis*), Brown Beak-sedge (*Rhynchospora capitellata*), Yellow-eyed Grass (*Xyris difformis*), and Thread-leaf Sundew (*Drosera filiformis*).

Threats: Torrey's Beak-sedge is threatened by any activity that changes the hydrologic regime, water, quality, or soil integrity of the coastal plain pond it inhabits. Region-wide, coastal plain ponds are imperiled due to shoreline development, water table drawdown (from wells), eutrophication (resulting from fertilizers and septic systems), and soil disturbance from heavy recreational use (ORV, horse, and foot traffic; camping; boat-launching; raking and digging).



Distribution in Massachusetts
1982-2007
Based on records in Natural Heritage Database

Fruiting time in Massachusetts

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							■	■	■		

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form as these donations comprise a significant portion of our operating budget.

Range: Torrey's Beak-sedge occurs along the coastal plain in Massachusetts and Rhode Island, and New Jersey south to Georgia, Alabama, and Mississippi. It is also rare in Delaware, Georgia, Maryland, North Carolina, and Rhode Island, and is presumed to be extirpated from New York.

Population status in Massachusetts: Torrey's Beak-sedge is listed under the Massachusetts Endangered Species Act as Endangered. All listed species are legally protected from killing, collection, possession, or sale, and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Torrey's Beak-sedge is currently known from Barnstable, Nantucket, and Plymouth Counties.

Management recommendations: Management of Torrey's Beak-sedge requires protection of the hydrology, water quality, and soil integrity of its habitat. Like many other coastal plain pondshore plant species, Torrey's Beak-sedge requires pronounced water-level fluctuations, acidic, nutrient-poor water and substrate, and an open, exposed shoreline, free from major soil disturbance. The hydrologic regime is particularly important; coastal plain pondshore species often require low water years for reproduction, but their persistence at a site depends on high water years to keep dense woody vegetation from taking over the shoreline. Protection of Torrey's Beak-sedge habitat may require exclusion of new wells and septic systems, prohibitions on fertilizer use, and restrictions on recreational use of the site. Recreational activities such as swimming, hiking, horseback riding, and ORV use should be diverted from the plant population location by re-routing trails, installing fences, and providing alternative locations for the activities.

Populations should be monitored to identify threats such as over-shading, invasive plant establishment, and soil disturbance. Torrey's Beak-sedge is most likely to be observed in late summer during low water years.

Sites that have encroaching woody vegetation can be carefully thinned after the growing season (November–April).

Habitat sites should checked for the early stages of exotic plant species invasions. The low-nutrient, acidic wetlands inhabited by Torrey's Beak-sedge are generally inhospitable for many exotic invasive plants, but invasives could become established at sites that have received heavy soil disturbance or nutrient input. Exotic species that could establish at such sites include Common Reed (*Phragmites australis* ssp. *australis*), Gray Willow (*Salix cinerea*), and Purple Loosestrife (*Lythrum salicaria*). To avoid inadvertent harm to rare plants, all active management of rare plant populations should be planned in consultation with the Massachusetts Natural Heritage & Endangered Species Program.

Updated June 2007